MANPADS Dismounted Load TTPs

SFC Holian

Load Planning for dismounted Stinger teams

Unless part of the load is removed from the soldier's back and carried elsewhere, all individual load weights are too heavy. Even if ALICEs are removed, key teams on the battlefield cannot fulfill their roles unless they carry excessively heavy loads. Soldiers who must carry heavy loads restrict the mobility of their units. Overloaded soldiers include the Stinger team (individuals carry weights up to and sometimes over 140 lbs), ant-armor teams (individuals carry weights of 111, 101, and 90 pounds), mortar teams (individuals carrying 83 pounds, even after distributing 100 mortar rounds of 3.5 pounds each), fire support teams (carry 92 to 95 pounds), and M-240 machine gun teams (carry 78 to 87 pounds). All radio operators equipped with the AN/PRC-119A are also loaded above the maximum recommended combat load (84 pounds). AT4 gunners and low-level voice intercept teams are overloaded as well as engineer breaching teams.

Leaders responsibility

The soldier's load is a crucial concern of the leader. How much is carried, how far, and in what configurations are important considerations when task-organizing teams in direct support to dismounted infantry. The purpose of load planning is two-fold. First, it allows the leader based on the mission to determine what ammunition, supplies, and equipment are essential. Second, it recognizes the potential impact of the soldier-load problem and emphasizes the need to carry only what is necessary.

Combat Load

A combat load consists of the minimum mission-essential equipment**.** This includes only what is needed to fight and survive immediate combat operations. There are two levels of combat load: fighting loads, carried where contact with the enemy is expected; and approach march loads, carried when transportation cannot be provided for equipment. Ammunition, Stinger missiles, and radio equipment will cause most combat loads to exceeded 72 pounds. This is where risk analysis is critical. Excessive combat loads of troops must be configured so that the excess can be redistributed or shed (leaving only the fighting load) before or upon contact with the enemy.

Fighting Load

This is what the soldier carries once contact has been made with the enemy. It consists of only essential items the soldier needs to accomplish his task during the engagement. For close combat and operations requiring stealth, any load at all will be a disadvantage.

Approach March load

This is the load that the soldier carries in addition to his fighting load. These items are dropped in an assault position, ORP, or other rally point before or upon contact with the enemy. On long dynamic operations, soldiers must carry enough equipment and munitions to fight and exist until a planned resupply can take place. These loads will vary and may exceed the goal of 72 pounds. Heavier approach march loads can be carried successfully in an emergency. When the mission demands that soldiers be used as porters (load bearers), 100-pound loads can be carried 20 kilometers a day for several days. Loads up to 150 pounds are possible, but they present an increased risk of fatigue and injury. However, when such loads are carried--contact with the enemy must be avoided, March rate must be very slow, and soldiers must rest before combat.

Sustainment Load

This load consists of the equipment required by the team for sustained operations. This equipment should be stored by platoon or Battery, normally at the combat trains or BSA, and brought forward when needed. It may include the teams truck, duffel bags, and spare equipment. In combat, protective items for specific threats, such as armored vests and chemical suits, may be stored in pre-configured unit loads.

Contingency Load

The contingency load includes all other items that are not necessary for ongoing operations, such as extra clothing and personal items. The critical element is for platoon and battery commanders to determine what goes in those loads and who will be responsible for the storage and delivery of them. Leaders should address these loads in the Coordinating instruction of the OPORD.

Flow chart

Army research indicates that a soldier can carry an amount equal to 30 percent of his body weight and still retain a high percentage of his agility, stamina, alertness, and mobility. When unable to move with stealth, agility, and alertness, teams are at risk. For the average soldier (weighing 160 pounds), this would be a 48-pound load. For each pound over 30 percent, the soldier loses a proportional amount of his functional ability. When his load exceeds 45 percent of his body weight, or 72 pounds, his functional ability drops rapidly and the chance of him becoming a casualty increases. Research also indicates that training can improve load-carrying capability by 10 to 20 percent at best. A diagram showing the concept of dividing the total soldier load into combat, sustainment, and contingency loads and the different levels of combat loads (fighting and approach march) is at Figure1-1.

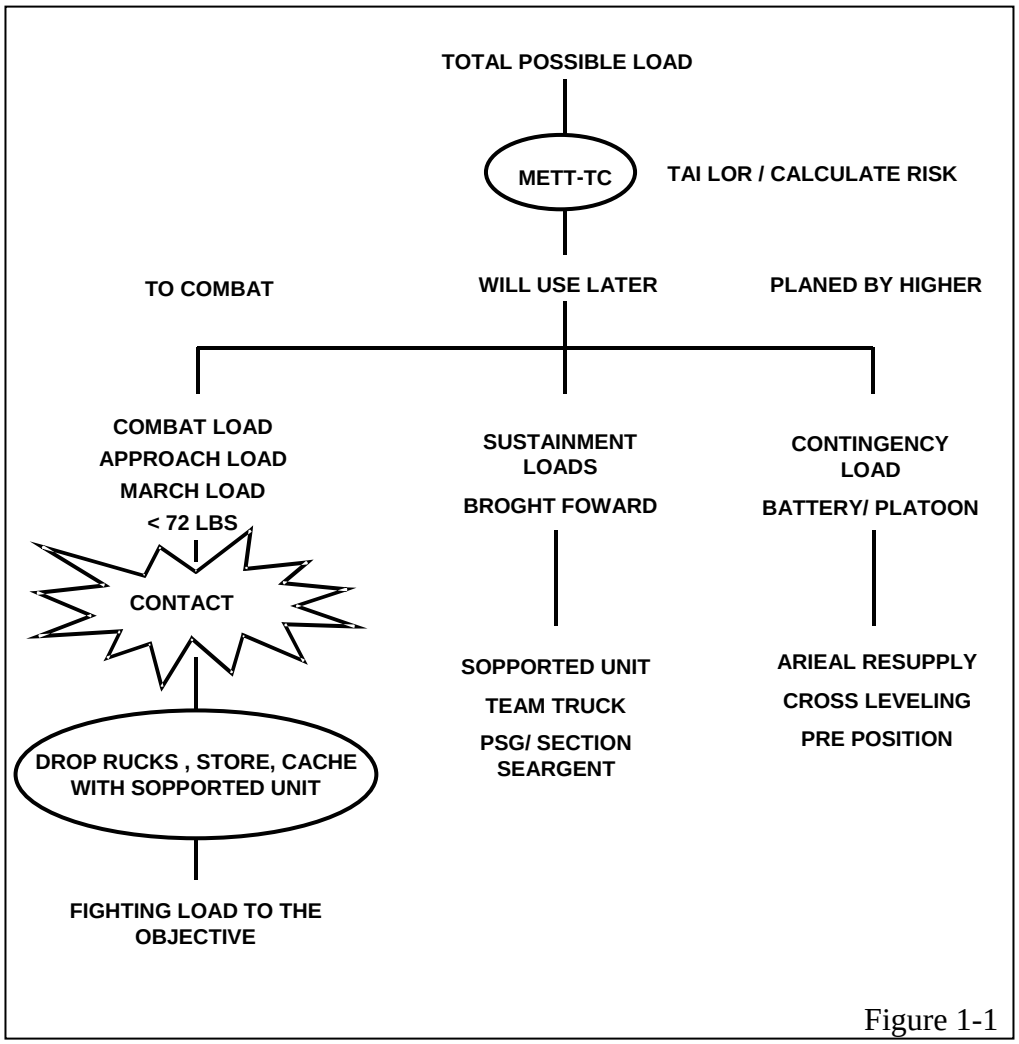

Figure 1-1

NOTE: If METT-TC changes start the process of retailoring the load.

NOTE: Identify Sustainment loads during the planning process and arrange to carry these loads forward on the supported units supply trains. If the supported unit, platoon, or battery does not have resources to store and bring forward sustainment loads, develop a plan for moving emergency loads. Team members can carry up to of 120 lbs of Approach, and March loads, although March speeds will be slow, and troops will be fatigued.

NOTE: The team leader cannot drop his ALICE upon contact, The team needs to tailor ALICEs in order two drop at least one with the supported unit.

Load Calculation

The combat load for each soldier consists of three components: **common essential items carried (worn)** by all soldiers regardless of threat, environment, or mission**; duty position load,** consisting of the soldier's assigned weapon (or components of the weapon system) plus ammunition; and variables, consisting of all other items carried, based on the commander's estimate of the situation. The latter are items that constitute the **environmental, threat protection, and mission loads.** Adjust combat loads so soldiers carry less than 72 pounds and divide combat loads into fighting loads and approach march loads; have soldiers pack ALICEs

and assault packs accordingly. All other team equipment goes into the sustainment or contingency load.

Common items (Carried or worn)		
Battle dress uniforms (BDUs), boots+		8.20 pounds
Pistol belt, straps, and First aid pouch		1.60 pounds
Canteen, cup, and Cover; with water		3.30 pounds
Gloves		0.03 pounds
Socks		0.30 pounds
Meals Ready To Eat 1 (MRE),		0.25 pounds
Bayonet with Scabbard		1.30 pounds
	Total:	**15.00 pounds**

Duty load (Duty position load)		
M16A2 with 30-round magazine		8.20 pounds
Two ammunition Pouches		1.80 pounds
Six magazines		6.30 pounds
Two grenades		2.00 pounds
M9 pistol With 15 rd Magazine		2.60 pounds
	Total:	**17.00 pounds**

Environment Protection		
ECWCS (Gortex jacket)		1.50 lbs
2-quart canteen, Cover, water		4.80 lbs
Poncho liner		1.60 lbs
Poncho		1.70 lbs
	Total:	**13.20 lbs**

Threat protection		
Protective mask		3.00 lbs
MOPP suit		5.81 lbs
Helmet		3.10 lbs
Total:		**6.40 lbs**

Mission load		
ALICE pack with Frame		6.30 lbs
Stinger missile with 1 BCU		36.1 lbs
SINGARS radio with battery		23.4 lbs
ASIPS radio with battery		19.4 lbs
IFF Interrogator		5.80 lbs
249 Squad automatic weapon (SAW)		16.41 lbs
One Box 5.56 ball 200 round (SAW Ammo)		6.92 lbs
AT- 4		14.80 lbs
PLGR with Battery		2.75 lbs
Binoculars		3.20 lbs
SHTU/HTU with Battery		8.60 lbs
Pick above item based on METT-TC	**Total:**	

All soldiers, regardless of the threat environment and mission, always carry certain items common to the any mission. These items are called the minimum-load configuration (MLC) along with the soldier's assigned weapon system and minimum amount of ammunition. Additions or deletions to the MLC will be based on the unit commander's estimate of the situation.

Example of team a leader's minimum-load configuration (MLC)

Common items
This does not include any socks, t-shirt, or personal hygiene kit it only includes one MRE.

Total 15.00 lbs

Environment protection
2-quart canteen
Poncho
Poncho liner

Total 11.70 lbs

Duty load
M16A2 with
30-round magazine
Two ammunition Pouches
Six magazines 180 rounds
Two grenades **Total 18.30lbs**

Threat
Protective mask
Helmet

Total 9.66lbs

Mission load
ALICE pack
SINGARS radio
PLGR
Binoculars
Stinger Missile

Total 64.55

Total: Load for Team Leader 119.21

Example of a gunners minimum-load configuration (MLC)

Common items
This includes only one MRE
No socks, t-shirt or personal hygiene kit

Total 15.00 lbs

Environment protection
2-quart canteen
Poncho
Poncho liner

Total 11.70 lbs

Duty load
Two ammunition Pouches
M9 pistol With 15 rd Mag
Magazines x 2
Two grenades

Total 7.40lbs

Threat
Protective mask
Helmet

Total 9.66lbs

Mission load
ALICE pack
IFF Interrogator
Stinger Missile
SHTU/HTU with
Battery

Total 56.80

Total: Load for gunner 100.56

Note: Based on the weight under common items on page 4, **This list does include** extra socks, T-shirts, or personal hygiene items, any COMMO Accessories such as hand mike, long or short whip antennas, extra batteries, NVGs, MOPP suit, flashlight. And based on the weather loads can exceed well over 140lbs.

Load Planning

The solution is command emphasis. Battery Commanders, Platoon leaders and First line supervisors must ensure soldiers carry no more than the weight necessary. Units should develop packing lists to include specific deployment options, based on METT-TC and incorporate into their unit SOPs**.** Battery and Platoon Leaders should authorize Section and team leaders to vary the composition of combat and sustainment loads based on METT-TC. Effective individual fighting loads and minimum approach march loads can only be achieved through safeguarding and transporting portions of the load–leaders must decide to tailor loads that result from risk analysis. Transportation resources must be used to avoid excessive loads on soldiers. The ability of a soldier to march and fight is directly related to his load.
The maximum individual load limit cannot be exceeded. Soldiers fight light with only the equipment required for the immediate mission. They receive additional weapon systems and materiel when required. Sometimes soldiers may have to carry more than the recommended combat weight. Leaders must realize how that excess weight impacts on the unit's effectiveness. FM 21-18 has additional information on the soldier's load.

Pre-Combat Checks (PCC)

Pre-Combat Checks are detailed final checks that all units conduct “before” and “during” Execution of training and Combat Operations. Pre-combat Checks should be performed as part of stand -to. They are continuous and are repeated when mission changes occur. The chain of command is responsible for developing, validating and verifying all pre-combat checks. FM 25-101. Pre-combat checks are vital step in every operation. PCC`s should be conducted not only at section level but, at every level. Leader should check them selves with the same list they check their soldiers with. PCC are not inventories, they are final checks for operability and Mission readiness.

Unit Standing Operating Procedures

SOP details how to apply doctrine within a specific unit; they may also be adapted in a given location for a given threat. They standardize unit-level techniques and procedures to enhance effectiveness and flexibility. As the name implies, SOP standardize routine or recurring actions not needing the commander’s personal involvement. In many cases, these are routine events. SOP reduces the number of instructions leaders need to address on operations. They provide a

common base of understanding for leaders and subordinate to execute routine events. The unit develops SOP from doctrinal sources, applicable portions of the higher headquarters' published procedures, the commander's guidance, and techniques and procedures acquired from experience. SOP covers the majority of routine tasks; they should not be too difficult to understand or take too long to read or learn. In general, SOP applies until commanders change them to meet altered conditions or practices.

Load management techniques

Once it has been decided what items are to be carried on the mission, the leader decides how they will be carried. Some items must be always being immediately available to the soldier, while others can be carried in the ALICE.

The key is to carry only what is necessary to accomplish the mission. The following techniques will assist the leaders in load management.

a. Make sure soldiers distribute their loads evenly over the body and LBE; they are easier to carry this way.

b. Carry critical items within easy reach; water, ammunition, and a first-aid pouch are carried on the LBE, other items in BDU pockets. Placement of all items should be standardized within the unit, but nothing must be allowed on the firing side of the LBE that prevents the soldier from taking a well-aimed shot.

c. Distribute loads throughout the unit. If it is necessary to carry bulk stingers, divide them among the supported unit, consistent with METT-T; however, ensure they can be distributed on the battlefield where needed.

d. Rotate heavy loads among team members or supported unit soldiers. Radios, and Stinger weapons can all be rotated if enemy contact is not imminent. Ensure that the assigned gunner is nearby when weapon system components are rotated.

e. Share or consolidate items; if the weather dictates sleeping bags be carried, carry only enough for those who will sleep. Team members can share the bag as they take turns rotating guard duty. In the same manner, one soldier can share a ALICE and take turns carrying it.

f. Team members should mark their ALICEs in order to facilitate quick recovery.
Consider cutting rations to two or even one MRE per man per day for short periods.

g. While carrying the ALICE, use water and rations carried in or on it first. If soldiers must drop their ALICEs, what they carry in their BDUs and on the LBE remains available. Replace ammunition, water, and rations carried on LBE or in BDU pockets as soon as possible.

h. Avoid unnecessary movement and displacements. To conserve the soldier's stamina, plan the mission as efficiently as possible.

i. Supervise the soldier's load closely. Soldiers may carry unnecessary items when they start on a mission and throw essential items away when they are tired. Packing lists for ALICE management and leader inspections before and during the mission ensure that only necessary

items are carried. ALICE management results in efficient use of a soldier's energy and ensures that essential items are available when needed in combat.

j. Team's may not always need the HTU equipment to function effectively. Ensure the threat warrants the extra weight of the HTU. Dismounted teams have limited Communication ranges due to the Long, and short whip antennas.

Tactical consideration when attaching teams to dismounted infantry.

To properly support any unit, the leaders (platoon leader, section sergeants, and team leaders) need to understand the supported unit's Tactics, Techniques, and Procedures. Infantry units use two techniques for conducting movement to contact- search and attack is used when the enemy is dispersed, when the enemy is expected to avoid contact or quickly disengage and withdraw, or deny movement into an area. In this type of operation the infantry moves into an area of operation (AO) carrying approach loads (72 lbs or heavier), establishes a patrol base conducts operations with fighting loads (48 lbs or less).

The Approach march Technique is used when the enemy is in fixed defensive positions. The concept behind the approach march is to normally move anywhere from 5 to 12 km (METT-TC dependent). The purpose is to avoid contact, and achieve surprise. The battalions or companies will drop approach loads in Operational Rally Point (ORP), and then move to an assault position, the assault position is normally the last covered and concealed position before reaching the objective. Careful planning by ADA leaders during this type of operation must be conducted.

Mission

- What is the mission of the supported unit?
- What are the dismounted combat loads of the supported unit?
- What are the planned movement rates of the supported unit?
- Are they carrying fighting loads 48 lbs?
- Approach march loads 72 lbs?

Integration

- Did the team receive a Warning order?
- Apply the 1/3 2/3 rule, 1/3 time for planning, 2/3 for preparation?
- Team Preparation time to hydrate, conduct pre-combat checks PCC, link up with supported unit and conduct Rehearsals.
- Will the supported unit receive sustainment loads?
- Who, what, when, and where will the teams receive sustainment loads?
- Recommend attaching teams to units with similar loads, IE, the company mortars.

Length of operation

- Weather conditions (current and future)
- Terrain (night or day)
- Duration Of Dismounted Mission
- Distance Of Dismounted Mission

Mobility

- The team's physical condition?
- Speed the supported is to move at.
- The stealth of the supported unit operation.
- 60 mm mortars normally have the same weights as dismounted stinger teams.

Movement consideration

Do Not Confuse Movement With Maneuver. Maneuver is defined movement supported by fire to gain a position of advantage over the enemy. At company level, there is considerable overlap between the two. When planning company movements, the CO must ensure the unit is moving in a way that supports a rapid transition to maneuver. Once contact with enemy is made, squads and platoons receive effective fire execute the appropriate battle drill leaders design to maneuver their units. The locations of attachments will depend on the situation. CS assets, such as engineers or Stinger teams, are positioned where they can best support the company. For example, the engineers may follow the lead platoon where they would be more responsive, and the Stinger team positioned where the terrain best supports engaging enemy aircraft.

The Company Mortars

The company mortars are located in the formation where they can provide Responsive fires in the event of enemy contact. They should be positioned where they gain security from the other units in the company. They normally are not positioned last in the company formation, because they have limited capability to provide security and their soldier's load often makes them the slowest element in the company. Also, when last in movement, their ammunition, carried by the other soldiers in the company, is not readily available.

- The mortars need open area to fire from and so do stinger teams.
- Company Mortars Movement rates are more compatible with stinger teams.
- Team can co-locate with mortars for security if the terrain supports the AD Mission.
- Stinger teams need help carrying ammunition when the mission dictates it. If teams our last in movement, their ammunition, carried by the other soldiers in the company, is not readily available as well.

Conclusion

There is no standard solution to the problem of overloading soldiers. The only doctrinal solutions available are the guidelines in FM 21-18 foot marches and the realization that this is a command responsibility. The dismounted stinger teams are limited by their physical ability. The team needs to be in the appropriate place on the battlefield, in a timely manner, and the weapon system and materiel required to defeat the enemy and survive. Excessive loads cost soldiers their energy and agility.